

What's New at Digital Library of Amateur Radio & Communications

2025 Compilation

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Digital Library of Amateur Radio & Communications (DLARC) is funded by a generous grant from Amateur Radio Digital Communications to create a free digital library for the radio community, researchers, educators, and students.

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January 2025

Happy new year from DLARC, your free online ham radio library. What's old is new again.

On January 1, a trove of old material entered the public domain in the United States. Written works from 1929 and sound recordings from 1924 are now free for everyone to copy, share, and adapt, including the cartoon characters Popeye and Tintin, and musical compositions Singin' in the Rain and Boléro. [This page at Duke University's Center for the Study of the Public Domain](#) has a great rundown of general-interest items that are newly free.

Here in the DLARC library, a bunch of radio-related material has also entered the public domain, including the 1929 books Principles of Radio, Short-wave

Transatlantic Radio-Telephony, The Physical Principles of Wireless, and the kids' chapter book The Boy Inventors' Radio Telephone. There's also Volume 17 of the Proceedings of the Institute of Radio Engineers. Here's a list of everything in DLARC that was published in 1929. I'm sure there are many fun re-use cases for images in those old Radio-Craft magazines.

DLARC has newly added material from Techcon, the ARRL West Central Florida Section Technical Conference. Since 2015 the annual conference has specialized in technical talks including antenna design, digital voice modes, DSP, and APRS. I've added presentation slide decks, videos, and proceedings documents from the conference. (The 2025 conference is next month, you can attend in person or online.)

Turning to newsletters. DLARC has added 159 issues of ATCO Newsletter, the journal of Amateur Television in Central Ohio. The newsletter has been published quarterly since 1982, promoting ATV knowledge and activities.

(If amateur television is of interest, this is a good time to mention that DLARC has a bunch of other ATV newsletters, including VHF-UHF Digest, Amateur Television Journal, CQ-TV, CQ-DATV, and Community Antenna Television Journal.)

We've also added 159 issues of INDEXA, the newsletter of the International DX Association — a non-profit organization devoted to the enhancement of amateur radio, worldwide peace, and friendship. Founded in 1983, the group has sponsored hundreds of DXpeditions to rare and semi-rare countries.

And, DLARC now has 495 issues of The North Shore Amateur Radio Club newsletter. NSARC is based in Oshawa, Ontario, Canada. They've done an admirable job of scanning back issues of their newsletter, which has been published since 1968.

On the college radio front, my colleague Jennifer Waits recently wrote a post on the Internet Archive's blog titled College Radio's Rich Legacy: Latest Updates from DLARC. Stealing from her breathless post: "The archivists at New York University student radio station WNYU-FM have contributed a number of 1980s radio interviews with music luminaries, including LL Cool J, ESG, members of Sonic Youth, Billy Idol, and Jello Biafra. Also in the WNYU collection is audio from the station's inaugural FM broadcast in 1973."

As we enter the new year, I'd like to remind you that anyone can upload material to Internet Archive, to make that material available to everyone. All it takes is a free account. Feel free to upload something that you create or curate, then e-

mail me if you think it's a fit for DLARC. Just this week, Dick H. uploaded hundreds of newspaper clippings about WNTC Radio, which was a college radio station that he DJ'd at once upon a time. WNTC was the shared station of Clarkson College (now Clarkson University) and Potsdam State Teachers College (now SUNY Potsdam). Dick invested hours of his time to research and collect more than 500 news clippings, uploaded them to Internet Archive, and now the WNTC Clippings collection is part of the college radio collection.

February 2025

I'm grateful for the friendships I've made while curating the DLARC library. To be perfectly honest, it's been more of an emotional roller coaster than I ever expected.

Part of my job is e-mailing or calling up old guys and asking for their material: do they still have copies of the magazine or radio show that they produced? Would they mind if I made them available to the world in a free online ham radio library? Some of the them are just the best, the nicest folks you'd ever want to talk to. They give me their permission, they send me their stuff to digitize, they chat with me about radio and the world and whatever, we keep in touch ... and then a few months later, they're on their deathbed.

More than a year ago I became friends with Hap Holly KC9RP, who was creator of The RAIN Report, and more recently the Classic RAIN Hamcast. Smart guy, great interviewer, just a pleasure to chat with. I realized recently that he hadn't posted a new episode of the Hamcast in a few months. I spoke with Stephanie, his wife. She told me that he is recovering from surgery for esophageal cancer, and has early stage dementia. He's at a nursing facility in Des Plaines, Illinois. Stephanie doesn't expect that he'll be returning home. She said that friends can visit, but Hap might need a reminder of who you are.

A more recent friendship I made is with Henry Ruh. He was publisher of A5, The Amateur Television Magazine. The first time I called him, he was in bed, at home, paralyzed. We talked about his history in ham radio and amateur television, about the people he knew and the technology he played with. Henry wasn't able to box up the stacks of magazines in his room, but convinced his caretaker to box up the stuff and Fedex it to me (even though that was certainly well outside her duties.) As a result, 42 issues of his trailblazing ATV magazine are online for the first time. Henry was upset that the first eight years (1970 or so through 1977) were somehow lost over the years. A list of the issues we need are in the DLARC Wantlist. Do you have them?)

I talked with Henry again last week to let him know his magazines had been archived. He was in the hospital, headed home soon for hospice care. Henry is funny, and seems to be handling devastating news with grace. I called him again a minute ago while writing this. His voicemail is morbidly hilarious, asking people to RSVP for his funeral. “No children will be allowed, as it will be an X-rated funeral. I will be naked...they will cremate me until my skin is nice and crispy. Enjoy eating my body.”

I don't know where I'm going with this, except to say the ham radio community is great. And, I'm so glad that Hap's and Henry's work are saved for posterity in the DLARC library. And, be sure to reach out to the friends you haven't talked to in a while, because tomorrow isn't guaranteed.

Now, take a deep breath with me and I'll try to switch gears to our regularly scheduled What's New at DLARC column.

In the boxes that Henry sent me was a single issue of TV-Amateur, a publication that I was previously unaware of. TV-Amateur was the magazine-style newsletter of AGAF, the German Amateur Radio Television Association. AGAF published the quarterly magazine, dedicated to amateur radio television, long-distance television reception, satellite reception, video technology and other image and text transmission methods, from 1969 through 2019. The group disbanded then was re-established as part of Deutscher Amateur-Radio-Club (DARC). Thanks to the gracious permission of DARC, all 193 issues of TV-Amateur are now available in the DLARC library.

I've been writing about adding material from Bob Cooper's estate for months now. I'm happy to report that pretty much all of the printed material from Coop is scanned and online now; there are still several boxes of videotapes waiting to be digitized.

The UK Microwave Group makes the most recent editions of its newsletter, Scatterpoint, available exclusively to members of that organization, releasing older newsletters after a couple of years. So I'm happy to say that DLARC has added the 2023 issues of Scatterpoint to the collection, for a total of 213 issues going back to the newsletter's start in 1999.

DLARC hit a jackpot of newsletters related to DXing recently. We've added the entire run of 425 DX News, which is "The Italian Weekly Bulletin for Serious DXers." Incredibly, this newsletter has been published every Saturday since 1991, never missing a week — as a result, we have more than 1,700 issues. The first 200 issues were written entirely in Italian. It switched to English in 1995 in part due to widespread access to the global Internet.

We've added 54 issues of the Kansas City DX Club newsletter, going back to 2020. The club is focused on DXing and contesting. The newsletter has been a labor of love by Mike Crabtree AB0X since 1981. Club members are on the lookout for older issues to add to the collection.

And, we've added an archive of DX World Weekly Bulletin, a newsletter about DXing that has been published by Björn Dettmaring ON9CFG since 2013. We've got more than 430 issues goin back to issue number one.

As usual, these are just the large swaths of things added. Interesting individual items are being added every day! 18 callbooks added to the callbook collection. Hundreds of business cards collected by Bob Cooper. Press clippings that Henry Ruh saved over the years. An incredible variety of historical ham radio newsletters. Remember, you can always spy on the latest material added to DLARC at this URL.

March 2025

It's an interesting in-between time here at DLARC World Headquarters. As I repeat at every opportunity, Digital Library of Amateur Radio & Communications is funded by a grant from Amateur Radio Digital Communications (ARDC) to create a free digital library for the radio community, researchers, educators, and students. We've been working at this project for about two and a half years, and we've done work that I'm so proud of. The library has grown to 149,500 items. 19.5 terabytes of information. We scanned 1.1 million pages in 2024 alone. We've rescued, recovered, digitized, and made available material that would have been lost forever otherwise. And, we've spent the money! The ARDC's grant was generous, but not infinite.

I've applied for another grant, asking ARDC for funds to keep adding new material to DLARC for another two years. I don't know if we'll be awarded a second grant. I'm cautiously optimistic but certainly ARDC's grant committee has many other opportunities to benefit the ham radio community in other worthy ways. If we don't get additional funding, I know two things for sure: the material that's already in DLARC will remain online permanently, and that I am insanely proud of what the project has accomplished. If we're done, I will walk away with the knowledge that we've created something of long-lasting, real benefit to the ham radio community worldwide.

So, it's an interesting in-between time. I'm wrapping up projects, putting bows on collections to make them complete and pretty in case it's time to walk away. But also, I'm planning for the future, in case we do get to keep working.

In the mean time, here's some of what I've added to DLARC in the last month.

1,300+ videos backed up from the Federal Communications Commission's YouTube channel. Right now we can't trust the federal government to leave content online (every video in the Consumer Financial Protection Bureau's YouTube page was removed in February) so now DLARC has a copy of the FCC's YouTube channel. And for good measure, DLARC now also has a copy of every FCC Daily Digest since 1994. The Daily Digest provides a brief synopsis of Commission orders, news releases, speeches, public notices and all other FCC documents that are released each business day. In addition to the digests themselves, DLARC has collected every document referenced in each Digest. Just in case.

We've scanned hundreds of issues of The Logger's Bark, the newsletter of the Radio Club of Tacoma (in Washington State). These span 1963 through 2003, and were lovingly bound into volumes by the club over the years. The club lent us the one-of-a-kind, irreplaceable books to scan. The thickest one was 950 pages! We scanned it all, and now they're searchable, downloadable, and available to the world.

I also added 41 issues of the Titusville (Florida) Amateur Radio Club newsletter, and 22 recent issues of the National Radio Club DX News newsletter — bringing the total to 2,786(!) items from that group.

I updated the International Radio Report collection. International Radio Report is a radio program about radio in Montreal and around the world. It has been published since 1987, but we have them going back to 2000. I added machine-generated summaries of every episode that didn't include official show notes from the show's creators. And, I freshened DLARC's collection of Glenn Hauser's World of Radio. Published since 1980, the show explores communications from around the world, with a special focus on shortwave radio. Again, I added machine-generated summaries of every episode that needed one. They may not be perfect, but in the absence of human-written show notes, they're much better than nothing.

We've scanned nearly 1,000 Sams PhotoFacts folders from the estate of Ron Patterson W6FM. These manuals provided repair information and schematics for all manner of radios, televisions, amplifiers, and other electronics. Each folder covers a dozen or more products. The repair possibilities are endless.

Finally, here's a treat of special interest to Zero Retries readers. Hank Magnuski KA6M sent to DLARC the source code to the digipeater that ran from his house

in Menlo Park, California in 1980 and 1981. He explained to me “The file DGPTR.PAS.txt is a Pascal/Z program file that ran the repeater at launch. Pascal, a now forgotten programming language (one of about 26 programming languages I've used in my career), had a Z80 version. This was running on a Z80 micro-controller board with self-contained memory and no disk. It did not use CPM or DOS or anything similar. Maybe like an Arduino system today.” Hank has open-sourced the code under the MIT License.

Even if you don't care to pore over old code, Hank included a document that he wrote “On the Care and Feeding of your Packet Repeater”. It's a fascinating slice of early packet radio history. Here's a bit of it:

“From its initial turn-on in December, 1980, and through most of the Spring of 1981 the packet repeater was operating out of my residence in western Menlo Park, California, a location which is in the foothills which border the western shore of the San Francisco Bay. It was an experimental machine then, but could be heard well through most of the northern end of Silicon Valley, even though the power level was modest. The only station equipped to use it then was located in the same house, so there was never any real problem with signal path. Since then we have installed a couple of upgrades to the control software, we have used a better CPU card, increased the power level, moved the repeater up to a 700 ft. elevation, and integrated its operation to be 100% compatible with the protocol used by the Vancouver Digital Communications Group's terminal node controller. The repeater has changed from being a laboratory curiosity to a major Bay Area repeater heard from Marin/Berkeley to south San Jose, and the user community has grown from a couple of stations to a network approaching 30 users.”

May 2025

Excuse the mess, there's still confetti all over the floor of DLARC World Headquarters, where we're celebrating a new grant from ARDC to continue growing the library's content.

Amateur Radio Digital Communications, the organization that initially funded Internet Archive's creation of the Digital Library of Amateur Radio & Communications, just gave a significant new grant so that we can keep building the library for another two years. I'm elated to be able to build on the solid foundation that we've created, to make the free online ham radio library bigger and better. Plans already in the works for phase two include acquiring and digitizing material donated by California Historical Radio Society and the SPARK Museum of Electrical Invention... and we still have (towering stacks!) of boxes of

books and manuals from Fair Radio Sales to scan. Until then, here's some of what's new at DLARC.

I'm thrilled to announce that DLARC is now home to an amazing collection of Wireless Institute of Australia's Amateur Radio Magazine, from its start in 1933 through 2012. These issues were lovingly scanned years ago by Will VK6UU. His scans have been available online for years at Will's web site, and World Radio History, and other places. The scans in the DLARC collection, provided by Will, are at a significantly higher resolution than the ones available elsewhere, making them easier to read, with clearer images and schematics. Like everything in DLARC, they're full-text searchable.

Here's more than 130 issues of AMSAT Satellite Report/Amateur Satellite Report. Radio Amateur Satellite Corporation's newsletter began in 1981 as AMSAT Satellite Report (and yes, we have issue number 1). In November 1983 the name was changed to Amateur Satellite Report. The issues were part of an amazing collection donated by Hank Magniski KA6M, more on that next month. (We're missing a few issues to complete this collection of newsletters: do you have issues 79 to 125?)

We've also added dozens of new issues of The DX Bulletin, filling out the library's collection. TDXB was written and published by Jim Cain, K1TN, from his Connecticut home. He published 324 issues from 1979 to 1986. In other newsletter news, a DLARC patron uploaded many issues of QRPp, the journal of the Northern California QRP Club — also going back to issue number 1, published in 1993. And we added 249 issues of 425 Magazine: the slick, colorful, monthly version of 425 DX News ("The Italian Weekly Bulletin for Serious DXers").

The Amateur Radio Callbooks category of DLARC is constantly one of the most popular parts of the library, though it's not the most glamorous. Maybe it's hard to get excited about 2000-page books filled with teeny tiny print of names and call signs — and yet, they're useful and popular historical reference materials. I recently added 32 callbooks to that collection (bringing it to nearly 150 books). The new callbooks include The Consolidated Radio Call Book from 1922, the Fourth Annual Official Wireless Blue Book from 1914, and the 1926 Citizen's Radio Callbook. There are more recent books from the New Zealand Association of Radio Transmitters and books covering North America as late as 1996.

We added conference presentations, papers, and other material from HamSCI, the Ham Radio Science Citizen Investigation. We now have material from their first conference in 2017 through the 2024 meeting. (Still to do: adding the March 2025 meeting.) We also updated the collection of conference material from

GRCon, the annual GNU Radio conference, with videos and slide decks of talks from 2015 through 2025.

I fired up the ol' 5.25" floppy drive to recover some interesting stuff from old disks: There's packet radio software WA7MBL MailBox V2.04. It's an DOS work-alike of the W0RLI MailBox software (which worked on CP/M systems). And there's PBBS - Packet Bulletin Board System published by Wake Digital Communications Group in 1985. And, meeting minutes from the Northwest Amateur Packet Radio Association (NARPA) for 1990-1991.

If the name NARPA seems familiar, maybe it's because they published a newsletter called Zero Retries. Here's a new collection of two dozen of their newsletters, from 1985-1992.

This was an unexpected surprise: we scanned a handful of Jameco Electronics catalogs donated by a ham. In the process of deciding where to file them, I stumbled on Jameco's own FTP site. (An FTP site! In 2025!) It's still humming away and serving up digital versions of old Jameco catalogs. So I downloaded them all, organized them, and now there's a Jameco Electronics Catalogs collection with 66 catalogs dated 1994 through 2018. The FTP site might be simply forgotten by the company, but kudos to any company that still runs an FTP server. If *you* run an FTP server filled with ham radio treasures, do let me know.

June 2025

One of my favorite things to discover is people whose special interest lies at the intersection of radio and some other — seemingly unrelated — hobby. Until now, my best example of this was the Bicycle Mobile Hams of America, a club for people who love bicycling, ham radio, and doing both together. My new favorite example is Neil Carleton VE3NCE's "Radio Stamps" radio show, which celebrated the intersection of radio and philately. His specialty was stamps *about* radio.

The program ran for five years (1990 through 1995) on the DX Partyline show of radio station HCJB in Ecuador. The program aimed to combine the fun of listening to international radio and collecting stamps from around the world. The show included stamp collecting tips, contests, descriptions of radio-related stamps, and discussions of radio subjects that could be found on commemorative stamps and postal cancellations.

For me, this particular rabbit hole appeared when the California Historical Radio Society sent DLARC a cassette tape with a recording of a single episode: a

scratchy, off-the-air recording of episode 39. I contacted VE3NCE asking about his program. He had a tape of only the first two episodes. The rest were lost. And that would have been the end of it, except a couple of weeks later I heard from him again: "In preparation for the installation of some new flooring, I've been emptying shelves and moving things to another room. One of my discoveries was a complete set of typed scripts that I prepared for recording my 50 Radio Stamps programs." So thanks to timely home renovation and the scanning prowess of his daughter, we now have scripts for all 50 episodes of the program (plus the actual recordings of the three episodes I mentioned.)

I learned from episode 8 that the first postage stamp in the world to show a radio receiver was issued by France in December 1938. "This semi-postal issue has a denomination of 90 centimes plus a surtax of 25 centimes. This stamp is special in another way too. The surtax was used to help provide radios for the blind. The design of the stamp shows a blind man listening to a radio." And from episode 3 I learned that in 1964, "a colourful postage stamp was issued in the United States to commemorate the 50th anniversary of the American Radio Relay League. It's a striking stamp, in red lilac, with a denomination of 5 cents."

Radio Stamps is endlessly fascinating, two kinds of nerdy at once, and a wonderful addition to DLARC.

Last month I mentioned the addition of 130+ issues of AMSAT Satellite Report/Amateur Satellite Report: the issues were part of collection donated by Hank Magnuski KA6M. We've added a whole lot more material from KA6M to DLARC, starting with 51 issues of AMRAD Newsletter, which is the newsletter of the Amateur Radio Research and Development Corporation (AMRAD). It's unclear to me exactly when that newsletter started, but Hank's collection starts in May 1980 and ends December 1983. We have a few more issues from the 1990s from another source. AMRAD's web site has an index of articles from 2001 to the present, but those older issues are hard to find. I've added AMRAD Newsletter to the DLARC Wantlist.

The boxes of material from KA6M also included stacks and stacks of papers documenting the early development of packet radio. Magnuski was a mover and shaker in the committees and groups that developed amateur packet radio, and he saved everything! He was involved with the Pacific Packet Radio Society and saved their early newsletters. He wrote a seminal document On the Care and Feeding of Your Packet Repeater. He served on the ARRL Ad Hoc Committee on Amateur Radio Digital Communication, and saved numerous documents about that group's work from 1982 through at least 1988. There's so much more, including correspondence, printouts of packet radio BBS discussions, design

documents ... an incredible trove of ham packet history, now all digitized, searchable, and downloadable for hobbyists and researchers.

Which leads me to the new Packet Radio History collection of DLARC, which includes Magnuski's documents plus hundreds more that I've collected from the U.S. government Defense Technical Information Center. There's more on the way — in fact, the best is yet to come — and I hope to tell you about more preserved packet radio history next month.

DLARC has also added 165 issues of the South Bay Amateur Radio Association (based in Fremont, California) Groundplane newsletter; and more than 800 videos by Patrick Stoddard WD9EWK/VA7EWK. His videos primarily focus on working satellites: a few contain activity by astronauts on the International Space Station. He also contributed about 30 magazine articles that he's written about DStar, ISS comms, and other digital communication technologies. The folks at Internet Archive's scanning center continue working through the vanloads of material that I recovered from Fair Radio Sales last summer. We've added several hundred manuals just in the past month, bringing the collection to over 7,000. Also from the Fair Radio stacks: hundreds of new old radio catalogs. Need a 662-page Cramer electrics parts catalog from 1972? Got it. How about a 1960s (maybe? Hard to tell) catalog of nothing but replacement television knobs? Got that too. And we've added dozens of books for checkout in the DLARC Lending Library.

Finally, DLARC just added the three-volume set of The Lenkurt Demodulator: selected articles from GTE's "Lenkurt Demodulator" publication, "an informative technical periodical published without charge to technicians, engineers, and managers of companies or government agencies who operate communications systems, and to educational institutions." Covering 1955 through 1975, topics include microwave communications, multiplexing, and digital data transmission.

July 2025

I've got huge news for fans of packet radio and packet radio historians: in the last month, the DLARC library has digitized reams of historical documents detailing the birth of packet radio specs, software, and hardware.

Last month I announced the addition of the Packet Radio History collection. Today I'm thrilled to announce two sub-collections within it: Packet Radio Temporary Notes and ALOHAnet.

Packet Radio Temporary Notes (PRTNs) were a series of informal technical documents distributed from 1972 through 1983 by the organizations that were

creating packet radio. Their purpose was to share research, experimentation, and development progress related to packet radio. There were, depending on how you count them, about 309 PRTNs published over that time span. The organizations involved included DARPA (Defense Advanced Research Projects Agency), Bolt Beranek and Newman (BBN), Network Analysis Corporation, Rockwell International, SRI International, Stanford University, University of California Los Angeles (UCLA), University of Hawaii, and Xerox PARC (Palo Alto Research Center).

These documents' distribution was limited to people who requested them. So they weren't secret by any means, but it took some effort to get them as they were released, and as a result it is taking a whole lot of effort to gather them now. In the Report on the Packet Radio Group Meeting of 8-9 November 1973, Dr. Bob Kahn "indicated that it was yet too early to put out formal publications...He indicated as a ground rule that permanent packet radio notes will be available to people who request them. This means that we give these notes out on request. But he does not want to get into a full-scale publication effort at this time." And that's the way it continued for a decade.

This is a very long windup to the pitch: DLARC has found and digitized more than 120 PRTN documents, primarily the earliest of them, released 1972 through 1976.

I encourage you to browse the PRTN collection to see what we've got. It might be hard at first glance to get excited by titles like PRTN 28: R.F. Channel Capacity Considerations or PRTN 55: Combinatorial Aspects of Message Flow in Packet Radio Nets or PRTN 98: Modulation Waveform Types, but it *is* exciting to look over the shoulders of the people who were working together to invent packet radio communications. It is exciting that these documents are available to the general public, to researchers and hobbyists for the first time. Also: The collection includes some draft documents that apparently didn't make it to final PRTN status.

I harvested the PRTN documents over the course of weeks from several sources. Most came to DLARC via Robert Garner, who has documents originally collected by David Wax, who was active in the development of packet radio and wrote some of the PRTNs. Others came from UCLA Library and the Defense Technical Information Center.

I've found a bunch of documents that maybe should have been distributed as PRTNs but (for unknown reasons) weren't. For instance, the Report on the Second Meeting of the ARPA Packet Radio Group at Collins Radio, January 22-23, 1973; and James C. Garrett's Baseline Definition of Packet Radio

Network (Revision 0). He also wrote the Packet Radio Repeater Design Plan, Preliminary Specifications 1.10 — which is a precursor to Packet Radio Experimental Repeater, Technical Plan, Quarterly Report. Like I said, it's watching as the technology gets hashed out and invented.

But! We're still a long way from having a complete collection of PRTN documents. I've updated the DLARC Wantlist with the ones that we need: a smattering from #2 ("Procedures for Distributing Packet Radio Temporary Notes") through #178 ("Packet Radio Protocol Program") and pretty much every note from #180 ("Cross-Radio Debugger" by Michael Beeler) through #326 ("User's Guide for Data Reduction and Analysis" by DesMarais.) I have FOIA requests pending and other queries out there, but they can take a long time. If you have some of these docs in any format, let me know.

We've also added the ALOHAnet collection (much smaller, still growing). Developed at the University of Hawaii in 1971, ALOHAnet was a pioneering wireless packet networking system that introduced the concept of random access protocols, allowing multiple devices to transmit data over a shared frequency channel without a central controller. Bob Kahn said, "The ALOHA system was to packet radio like the original timesharing computer was to Arpanet."

The company that was called Bolt Beranek and Newman is now called RTX Corporation. When I asked Penny Steele-Perkins, RTX's research librarian, about PRTNs, she uncovered a bunch of *other* documents related to packet radio that had (as far as we can tell) never been released to the public. One of them is the 1982 file BBN REPORT-5675: Packet Radio Network Final Report. "This report describes the work accomplished under contract MDA 903-80-C-0206. which covered the last three years of the Packet Radio program. Over the past ten years. BBN has taken a leading role in the development of Packet Radio technology. In fulfilling this role we became the system architects of the Packet Radio program. creating the Tier and Multistation designs as well as several of their predecessors. At a more local level, we designed SPP. the reliable end-to-end protocol used within the network, and we have significantly contributed to the development of the TCP protocol used for Internet traffic."

Steele-Perkins also surfaced a bunch of other "new old" documents, primarily quarterly progress reports as they did their work in the new world of digital communications.

One last batch of packet radio things: Tom McDermott N5EG sent several floppy disks of TEXNET software. TEXNET was a project of the Texas Packet Radio Society: a digital packet network protocol with a standard hardware package for

network nodes, to create an open, high speed backbone with access through multi-connect capable local nodes. Thanks to Tom, DLARC now has versions 1.74 and 1.75 of the TEXNET Z-80 assembly source code, and the C source code for the V.29 Wireline Modem. (He told me: “Qwest donated some 4-wire E&M circuits to TPRS that we used to build out the network to difficult places (e.g. west Texas). We used surplus commercial V.29 modems, but all 50 failed. So I designed the hardware and Tom Aschenbrenner the software for our own V.29 modems based on a Rockwell DSP FAX Modem IC.”)

Finally, he sent the source code for the TAPR DSP-93 Digital Signal Processor, to make that hardware work as a digital sampling function generator, oscilloscope, and spectrum analyzer under Windows.

We’ve added plenty of non-packet radio material to DLARC this month as well. (For instance, check out issue 2 of SWR, the impressive new magazine-newsletter from the Caribbean Amateur Radio Group.) You’re always invited to see DLARC's newest additions at this URL, or track additions by feeding this URL to your RSS reader.

August 2025

My hunt for packet radio history (which I wrote about in detail last month) continues to reveal unexplored rabbit holes. This week DLARC added two late-1970s documents from the Defense Advanced Research Projects Agency, documents that had never been available to the public before. They show U.S. government contractors' earliest experiments in digitizing and transmitting speech using packet radio: the great-grandfather to modern digital radio modulation modes like M17.

First, AO 3243 SRI, Packet Radio Speech Experimental Program. This 1977, 282-page, proposal presents a year-long program for research in digitized packet speech communication systems. SRI International participated in the initial ARPAnet speech transmission experiments and implemented voice communication capability on the PRnet, and proposed further research to determine the capacity of the PRnet to support speech traffic in addition to data traffic “in a tactical environment where mobile radios are used for conversations with several other individuals.”

A second document, AO 3549 NAC (Kahn), Packet Radio Program, shows how Network Analysis Corporation proposed to investigate combining data and digital voice transmission over packet radio. The computer hardware for running tests was a Control Data 6600 computer; the language was Fortran. The budget was more than \$200,000.

Getting these documents involved a Freedom Of Information Act request to the National Archives at College Park, Maryland. Once they determined that the material was unclassified, I sent a colleague (who first needed to obtain a researcher access number) to College Park to photocopy the files. Finally, they went to the Internet Archive scanning center to be digitized.

Another related document that I requested (AO 3243 Packet Speech Experimental Program, approximately 400 pages) “requires additional review for information protected from release under the FOIA.” The next sentences of government-speak made me laugh to keep from crying: “Your request does not exceed 700 pages, so it is assigned to our first-tier processing queue. Taking into consideration our existing backlog, we estimate it will take 39 months to complete processing.” So maybe, *maybe*, in three years we’ll get to see that other document.

In other news, I’ve added a [new collection for issues of AMSAT Newsletter and AMSAT Journal](#), publications of The Radio Amateur Satellite Corporation. We have a smattering of issues, with lots of gaps to fill. The earliest issue we have is from March 1972, but that’s Volume IV, so presumably the publication started in 1969, the year the organization was founded.

In March I mentioned that I added 41 issues of the [Titusville \(Florida\) Amateur Radio Club](#) newsletter. We’ve scanned a bunch more of their newsletters (its name has changed over the years, including Titusville Communicator and TARC News) and are up to 236 issues, going back to 1988. Meanwhile, from the other coast, we’ve added 200+ issues of The Radio Club of Tacoma (Washington) “Logger’s Bark” newsletter. Now we host every issue of their newsletter from 1963 through today.

Turning to software for a moment. One of my favorite other ARDC-funded projects is [Radio Catalog: Ham Radio Software Preservation and Restoration](#). I hear that they’re about finished with that project, having preserved the source code to a bunch of long-standing ham radio software. They’ve put the recovered code up [on GitHub](#) for programmers and hackers, and they also send the original, unmodified source code to DLARC. As a result, we just added the code for [xwefax](#) (Wefax and Radiofax images on Linux), [xritty](#) (for communications in the RTTY digital mode), [ARIM](#) (Amateur Radio Instant Messaging), [vARIM](#) (GUI host mode program for the VARA HF Modem), [gARIM](#) (a GUI for ARIM), [rmsgw](#) (Winlink2000 RMS Gateway for Linux), and [DPBOX](#) (amateur packet radio mailbox). To a certain brand of radio software hacker, these are seven new shiny gold bars recovered from the depths.

What's next? In September, I plan to visit the SPARK Museum of Electrical Innovation in Bellingham, Washington: the museum is culling some of its radio books and magazines, and I'll get to sort through the material to choose what will be added to the DLARC library. From there, I'll head to the Zero Retries Digital Conference in Everett, Washington where DLARC will have an informational booth and I'll give a presentation.

There will also be: The Box. A donation box where the Zero Retries crowd can donate items to be added to DLARC. What printed or magnetic media items do you have that you'd like to see digitized and made available to the world? I invite folks to donate their QSL card collections, old logbooks, ham radio newsletters and product catalogs, and software on floppy disks. Don't forget the DLARC Wantlist, the ever-changing list of DLARC's most-desired material. The Wantlist includes early issues of A5 The Amateur Television Magazine, certain issues of Tom Arvo's Digital Digest newsletter, certain editions of FM ATLAS by Bruce F. Elving, AMRAD newsletter, AMSAT newsletter, and certain issues of AMSAT Amateur Satellite Report. And any/all issues of Amateur Radio Trader — we have permission to publish them all, but have precious few issues, including this just-added one from 1997. If any of those things appeared in The Box, that would be an incredible gift to DLARC.

Next month I'll tell you about the 9 pallets (!) of vintage tech manuals that just arrived at the scanning center.

September 2025

It's been a busy month at Digital Library of Amateur Radio & Communications, with many new items added to the stacks of your favorite free online ham radio library.

The California Historical Radio Society recently donated a stack of VHFer newsletters, a publication that seems to be not too well-known. We scanned the 21 issues. VHFer was published in the 1960s by Parks Electronics Laboratory, focusing on "50 MC and Up". That's an old-school way of saying 50 MHz and up, so the 6m band and higher. It's filled with fascinating projects to build, including articles about moonbounce and meteor scatter. We have some issues in volume 3, and all of volumes 4 and 5. Vol. 5, No. 6, dated November 1967, is the final issue. "Primarily it was a matter of requiring more time than I could spend because of our growing medical electronics business," which apparently worked out because Parks Medical Electronics is still in business, not too far from me in Oregon. I reached out to them to find out if they had any more issues of the newsletter — but no luck. So for now, volumes 1, 2 and 3 go into the DLARC Wantlist.

From the estate of Bruce Berr, DLARC received 9 early issues of Glenn Hauser's DX Listening Digest and 24 issues of another Hauser publication, Review of International Broadcasting for shortwave listeners. DLARC was already home to thousands of issues of DX Listening Digest, but these new additions are easily the earliest entries, going back as far as 1979.

CHRS also contributed 32 issues of The Communicator, the publication of the now-defunct National Amateur Radio Association. NARA was formed early 1989 by Don Stoner W6TNS. The first issue we have is dated May 1990. According to an old issue of the RARS Exciter, the group was formed “with the specific function of promoting ham-radio to the non-ham populace, and lobbying for the creation of a ‘no-code’ ham license in the US. NARA cites the un-popularity of the code with today's computer oriented youth as being a significant factor affecting the growth of the ham ranks.” The group was formed due to ARRL's “foot-dragging in support of a no-code license.” It's hard to tell exactly how long the group lasted. It was still going in 1994: Stoner claimed about 7500 members at that time. It's unclear when the group dissolved: I couldn't find records on Washington State's Secretary of State web site. Stoner died in 1999. We have Communicator issues through July/August 1994, v4n4. Do you have issues published after that?

(Tangentially, I also learned that in 1959, Stoner is the person who suggested the name of the OSCAR satellite — Orbiting Satellite Carrying Amateur Radio.)

Another defunct group is the Texas-based West Gulf DX Club, which published a newsletter called WGDXC Bulletin. CHRS sent us bound volumes of this club's newsletter from 1956-1960. At first glance, those five volumes may not look like much, then you'll notice that each one is 200 to 300 pages. I'm glad we got them scanned when we did: some of the purple mimeographed pages are fading away.

While we're talking about Texas: DLARC added 126 issues of Bexar Wire, the newsletter of the San Antonio Radio Club. The group was founded in 1919, and is still active today.

Steve Stroh donated 87 issues of Radio Communications Monitoring Association's RCMA newsletter spanning 1978 through 1990. Radio Communications Monitoring Association was a group dedicated to scanner monitoring and related radio communications enjoyment. The RCMA Newsletter was folded into US Scanner News, and thanks to Steve we now have 10 issues of that magazine too. There's an interesting article in the February 1997 issue of Monitoring Times about the alleged *drama* that happened between those

publications. It's a fun read if you want to know about the challenges of publishing radio magazines some 30 years ago.

We also scanned 455 issues — 27,000 pages! — of *Experimental Wireless* and *The Wireless Engineer*, a journal published in the United Kingdom, from 1923 through 1956. And, *Electronic Technology*, published in the UK in 1962. [Read them all here.](#)

A big project we're still in the middle of: Internet Archive has had pallets and pallets of vintage tech manuals in storage for years — material recovered in 2015 when a company called Manuals Plus went out of business. Long-time Zero Retries readers may recall that we scanned four pallets of radio-related material from that collection last year. ([Here's the whole story.](#)) Now we're back for more: 9 pallets (!!) of vintage tech manuals are being processed at the scanning center. You can see the [latest additions here](#). If you check back again tomorrow, you're likely to see dozens more — the work gets done fast. You'll notice that the manuals don't have titles or manufacturers set at first. I come around and do them in batches. You can [limit the view to titled manuals](#) with this link. The collection includes both radio-related and non-radio-related material. Later, I'll move the radio-related manuals into DLARC. We could use your help paying for this particularly expensive, expansive project: make a tax-deductible donation to Internet Archive with this [special link](#).

Finally: this month I visited the [Spark Museum of Electrical Invention](#) in Bellingham, Washington. I enjoyed the museum immensely. I learned about Giuseppe Zamboni: the poor guy genuinely thought he had invented a perpetual motion machine. What he had actually built was a kind of battery that ran for a long time. When he died, it was still running, so it was perpetual as far as he knew. But the real purpose of my visit to the museum was to explore the stacks of printed material the museum no longer needed. I ended up with 7 50-pound boxes of newsletters and magazines, which are now at the Internet Archive's scanning center to be digitized. I'll let you know when that material is online for you to enjoy.

Finally finally: If you're around the California Bay Area, please come to the Internet Archive's October events! On October 21, go behind the scenes at the Physical Archive in Richmond, California to see the lifecycle of books, records, and film from donation to digitization. On October 22 at IA's San Francisco headquarters: our annual celebration, marking 1 trillion webpages preserved in the Wayback Machine. There will be talks, performances, and a party full of interesting people including me. [Learn more and register for these events here.](#)

October 2025

Greetings from — not DLARC Headquarters in Oregon, but from Internet Archive headquarters in San Francisco, California.

Earlier this week the Archive held a party to celebrate the milestone of one trillion web pages archived in the Wayback Machine. The Wayback Machine is a tool that has been backing up the web since 1996, then lets people see websites as how they used to be — and websites that no longer exist at all. A trillion pages saved is an amazing milestone, and I'm thrilled to be here in the Great Room at Archive HQ to celebrate with colleagues and community.

Last month I mentioned the addition of 80+ issues of Radio Communications Monitoring Association's RCMA newsletter. If you've already managed to read all of those, don't fret because we have found and scanned another two dozen issues from 1979 through 1985. (The collection is filling in nicely, but if you have any issues that we lack, let me know.)

We added 170 newsletters from the "Association of Clandestine (radio) Enthusiasts". Their monthly newsletter was called A*C*E: dedicated to pirate radio and the "clandestine listening" hobby. It was published from about April 1982 through September 2005. Founded by Darren Leno, an active pirate DXer, Leno operated the club and newsletter for the first few years. Later, it was headed up by others. It included profiles or interviews of pirate stations, regular columns, and technical articles. During its early-to-mid 1980s heyday, it also included articles and loggings of spy-number stations. For most of modern pirate radio history, the A*C*E was the source for the exchange of logs and maildrop information for pirates. We scanned some issues from paper, then I found many more issues that others had scanned.

California Historical Radio Society sent a batch of videotapes that we've digitized, including several tapes of Military Radio Collectors Group and Military Radio Restoration Group meetings and presentations from 1998 through 2001.

For newsletters that are less clandestine and more ham radio, we've added 28 issues of GroundWave, the newsletter of the Saint Paul (Minnesota, USA) Radio Club.

Hundreds of newly scanned radio manuals continue to arrive in the DLARC Manuals collection — here's the link with the newest material on top. This is largely material from last summer's raid of Fair Radio Sales, with oodles of military radio guides, service and repair manuals, and schematics. That collection is pushing 8,500 items, with 2,150 added so far in 2025.

Here's something else I've been working on — insert Under Construction GIF here — still in progress, not as finished as it will be. I dug up a trove of Usenet newsgroup posts about amateur radio. Usenet was the discussion board of the early Internet. Well before the web, Usenet was one of the ways Internet strangers found each other to discuss myriad topics. There were a lot of Usenet discussion groups about radio, and some were very active.

So now DLARC has text and pdf versions of some of these discussions. There's an archive of the Usenet group [net.ham-radio](#) from 1981 through 1986, and one of the group [net.ham-radio.packet](#) from 1985 to 1986. In 1987 or so, Usenet groups were all renamed and reorganized (in a process unsurprisingly called the "Great Renaming".) Of the renamed groups, we have [rec.radio](#) from 2000-2004, [rec.ham-radio.packet](#) (1987-2004) and [rec.radio.amateur.digital](#) (2000-2004). I'm not quite sure what differentiated *digital* from *packet* in these discussions — I suppose all packet radio is digital, but not all digital radio is packet. And finally (for now) the group [rec.ham-radio.swap](#) from 1989 through 2005. They are an incredible trove of radio conversations, all full-text searchable, of course.

I've added these all to the [DLARC E-mail Lists and Usenet archive](#), which also has radio-related email discussion groups going back to the dawn of the Internet age. I say this is "not as finished as it will be" because I have archives of 15 other Usenet newsgroups that aren't ready for prime time, including discussion groups about space communications, Citizens Band, DXing, and more. I'll let you know when those are polished and easier to use.

December 2025

DLARC has added an enormous trove of publications from AMSAT, the Radio Amateur Satellite Corporation, with the gracious permission of the organization. Formed in 1969, AMSAT designs, builds, launches, and operates satellites carrying amateur radio payloads. In addition to keeping amateur radio in space for 55 years, AMSAT has created a variety of publications, many of which are now in the DLARC library.

DLARC now offers a tantalizingly, nearly complete collection of the [AMSAT Amateur Satellite Report](#) newsletter — from the first issue in February 1981 through issue 193 in 1990. (Only three issues are missing: 147, 189, 190...and any past issue 193 if those were published.)

And! DLARC has added 96 issues the AMSAT Journal, bringing it to 228 issues in the [AMSAT Newsletter and AMSAT Journal](#) collection. Also in that collection are [19 issues of Orbit](#), a glossy magazine sporadically published by AMSAT from

1980 through 1984. Thanks to Paul Stoetzer, N8HM, AMSAT's Executive Vice President, for helping make all of these items available in DLARC.

While we're on the topic of satellite communications, we've added a bunch of historical satcomm material donated by Hank Magnuski KA6M. These include several drafts of the the AMICON System Specification draft ("This is a draft version of specifications for use of the data communications special service channel (L2) on the AMSAT Phase III satellite, the communications medium which serves as the foundation of the AMSAT International Computer Network (AMICON).") And a 1985 document describing NASA's Advanced Communications Technology Satellite Program (ACTS). And a AMSAT Orbital Prediction Program in BASIC and Pascal programming languages. There's plenty more satellite communications history in this amazing collection from KA6M.

All at once, the QSL collection at DLARC has grown from a smattering of cards here and there to an impressive collection of more than 50,000 cards and verifications. It started when the Badger Amateur Radio Society, a student organization at the University of Wisconsin-Madison (W9YT), scanned and uploaded more than 17,600 QSL cards, some apparently going back to the club's founding year of 1930. The collection includes beautiful card designs from all over the world. More details about the digitization and archival project of the BARS QSL cards is at <https://qsla.hadleyso.com>.

Around that same time I heard from the National Radio Club ("the world's oldest and largest medium wave DX Club") which wanted to mirror their collection of QSL cards and verification letters. Ta da, DLARC's new National Radio Club Verifications collection contains more than 38,000 cards and letters from ham radio stations, mediumwave, and broadcast AM/FM stations worldwide.

Apparently all this effort somehow put the idea of sharing QSL cards into the universe, because Joseph Harris of Columbus, Ohio scanned dozens of his dad's QSL cards from circa 1955-56, and my buddy Bill Lange started scanning his dad's card collection. You, too, can scan your (or your family member's) QSL card collection and share them in the DLARC library. It's pretty easy, can be done in little batches, and is a great way to preserve your family's legacy as part of the radio hobby.

I've written about our collection of Bexar Wire, the newsletter of the San Antonio Radio Club, before. The club has been around a long time, and club members managed to unearth earlier editions of the newsletter: we were able to scan 144 additional issues of "San Antonio Radio Club Bulletin" and "The Exciter" spanning 1955 through 1978. We've also added dozens issues of the California

Historical Radio Club Journal — the issues now span nearly 50 years, 1975 through 2024.

Also we've scanned 130 issues of The Horn Speaker, "the newspaper for the hobbyist of vintage sound and electronics" published by Jim Cranshaw N5FSL. It started circa 1969 with the title Antique Radio, and was soon renamed The Horn Speaker with the April 1972 issue. We have sporadic issues from 1973 through 1997. These issues are part of the lot donated to DLARC by the SPARK Museum of Electrical Invention.

In a separate Internet Archive project, folks have been working hard to scan issues of ERIC from microfiche. ERIC is "Educational Resources Information Center", an online library of education research and information, sponsored by the U.S. Department of Education since 1966. This project has revealed a number of items of interest to ham radio, so I've added them to DLARC: including the Newsletter of the Language by Radio Interest Group. ("LBRIG Newsletter consists of news items, short articles, general information, and opinions on the subject of language learning by radio. Subjects discussed include guidelines for selecting and purchasing shortwave equipment, where to obtain broadcast directories...") Here's the first year of issues and volume 2. Here's a 200-page document on Building Telegraphs, Telephones, and Radios for Middle School Children and Their Parents. Also, here's a 1986 treatise on Amateur Radio Satellite Communications, and one from 1984 on Antenna Construction and Propagation of Radio Waves.

Next month brings a new year! In 2026, written works published in 1930 will move into the public domain in the United States. Can't wait to share new old public radio material with you.

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